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Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner.

Upon entry of the instant Amendment, Claims 1-8, 10-15, and 20 are all of the claims under consideration before the Examiner. Claim 10 is canceled without prejudice. Claims 1-9 and 11-20 are amended. As is the specification. Applicants respectfully submit that no new matter has been added by the present amendments. Support for the amendments can be found generally throughout the Applicants' disclosure. It should also be noted that this Amendment is not in acquiescence of the Office's position on the allowability of the claims but made merely to expedite prosecution.

The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

I. CLAIM REJECTIONS:**A. 35 U.S.C. 112, Second Paragraph**

Claims 1-8, 10-15, and 20, stand rejected as being indefinite. Applicants respectfully submit the rejection is now moot in view of the present amendments to the claims; therefore, their withdrawal is appropriate.

B. 35 U.S.C. 102(b) Rejection over GB 1 200 614

Claims 1-8 and 10 stand rejected as being allegedly anticipated by the English Patent, GB 1 200 614 (hereinafter "'614").

The Examiner indicates that the '614 reference anticipates the presently claimed invention, because "the compound gadolinium tungsten as set forth on page 2, lines 28-29" is taught by the reference. However, a closer examination of the '614 patent reveals that the disclosed compound is not gadolinium tungsten, but rather is "gadolinium tungstate". (Page 2, Lines 28-29)

Since the presently claimed embodiment of the invention sets forth a mixture of, *inter alia*, gadolinium and tungsten the '614 reference fails to teach all the elements of

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the presently claimed invention and, therefore, does not anticipate the claims. In light of the present shortcomings of the art, it is respectfully requested that the anticipation rejections be withdrawn.

C. 35 U.S.C. 102(b) Rejection over Hall et al.

Claims 1-8 and 10 stand rejected as being allegedly anticipated by Hall et al., USPN 3,751,387 (hereinafter "Hall").

As best understood, Hall relates to "[a] composition adapted for producing a self-supporting structure or nuclear radiation shield, which composition comprises a mixture of a solid material and sucrose or the like, along with a solvent for the sucrose or its substitute, whereby a self-supporting structure can be set by removal of the solvent from the saturated solution of the solute." (Col. 2, Lines 26-32)

The Office suggests Example 31, Gadolinium Tungsten, in the reference anticipates the presently claimed invention. Applicants respectfully disagree for the following reasons.

Applicants believe the example referenced incorrectly lists "Gadolinium Tungsten," and that one skilled in the art reading the reference would understand Example 31 to mean, perhaps, gadolinium tungstate (Gd_2WO_6). In support, Applicants first would like to draw the Examiner's attention to the fact that there is no example provided in the table of examples for the use of a mixture of two compounds (in addition to the water and sucrose). Instead, all the components listed are compounds not mixtures of compounds; therefore, it is unlikely that Example 31 was meant to be the only example in which the component listed was two compounds rather than one. It is also doubtful that a single alloy compound, gadolinium tungsten was meant (Gd-W), since the entire reference is silent as to such alloys.

In addition, Hall specifically discloses the examples in which tungsten is used and Example 31 is not listed. Specifically, Hall states, "Examples 9, 10, and 22 containing tungsten...illustrate the use of heavy metals in the compositions for effective attenuation of gamma radiation." (Col. 9, Lines 52-55) It seems unlikely that Hall would not have included Example 31 if it were understood to mean gadolinium tungsten.

Finally, assuming *arguendo* that Hall meant to provide a gadolinium-tungsten alloy or a mixture of gadolinium and tungsten in Example 31, there is simply no teaching or even a hint of using the compounds in the amounts presently claimed as required to anticipate the claims. Further, it would be unclear to one skilled as to how the invention of Example 31 is actually used or made. There is neither an indication of how such an alloy would be prepared nor the proportions of the gadolinium-to-tungsten that would be used in either an alloy or a mixture. In such an instance the reference would clearly not be enabled and, again, would not anticipate the present claimed invention. (MPEP 2121.02). In light of the above, Applicants respectfully request the withdrawal of the claim rejections based on the Hall reference.

D. 35 U.S.C. 102(e) Rejection over Haubold et al.

Claims 1-8 and 10 stand rejected as being allegedly anticipated by Haubold et al., US Patent Application Publication 2003/0032192 A1, (hereinafter "Haubold"). Applicants disagree and traverse said rejections for the following reasons.

The Office opines, Haubold et al. anticipate the presently claimed embodiment of the invention, because they disclose the preparation of the compound $\text{Gd}_{0.9}\text{Tb}_{0.05}\text{TaO}_4$. (Office Action Page 5). Haubold relates to the synthesis of nanoparticles. "The synthesis of the invention in organic solvents allows [one] to gain a considerably higher yield compared to the prior art synthesis in water." (Abstract) Thus, as best understood, a synthesis reaction is disclosed for the preparation of the $\text{Gd}_{0.9}\text{Tb}_{0.05}\text{TaO}_4$ compound.

The present invention stands in contrast to Haubold. The presently claimed invention is a mixture of compounds, not a compound *per se*. Thus, the claims are not anticipated by the reference and the rejections should be withdrawn at this juncture.

E. 35 U.S.C. 102(e) / 103(a)

Claims 11-15 and 20 stand rejected as being allegedly anticipated by Haubold or alternatively as being obvious over Haubold or GB 1 200 614 ("614"). Applicants respectfully disagree.

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As the Examiner is assuredly aware, to establish a *prima facie* case of obviousness, the prior art reference or combination of references must, *inter alia*, teach or suggest all of the limitations of the claims. (In re Wilson, 165 USPQ 494, 496, (CCPA 1970))

As set forth above, neither Haubold nor GB 1 200 614 teaches all of the presently claimed elements of the claimed invention and, therefore, cannot anticipate the claims. Furthermore, Applicants submit the references fail to suggest to one skilled in the art the presently claimed invention. These rejections should now be properly withdrawn.

F. 35 U.S.C. 103(a) Rejection over Lange

Claims 1-8 and 10-15 and 20 stand rejected as allegedly being obvious over Lange, USPN 6,548,570. Applicants respectively disagree; however, Applicants submit the rejection is now moot in view of the amendments to the claims.

Presently, the claims provide for gadolinium if present as a compound to then be in the form of gadolinium(III) oxide. With respect to gadolinium containing compounds, Lange only discloses the use of gadolinium ox[y]-sulfide. The reference clearly fails to teach all of the elements of the presently claimed invention and is, therefore, not obvious. The rejections should now be withdrawn.

II. CONCLUSION:

In view of the foregoing, it is respectfully submitted that independent Claim 1 is fully distinguishable over the applied art and is thus in condition for allowance. By virtue of dependence from what is believed to be an allowable independent Claim 1, it is respectfully submitted that the remaining claims are also presently allowable. Notice to the effect is earnestly solicited. If there are any further issues in this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

The "prior art made of record" has been reviewed. Applicants acknowledge that such prior art was not deemed by the Office to be sufficiently relevant as to have been applied against the claims of the instant application. To the extent that the Office may

apply such prior art against the claims in the future, Applicants will be fully prepared to respond thereto.

The USPTO is hereby authorized to charge any fees, including any fees for an extension of time or those under 37 CFR 1.16 or 1.17, which may be required by this paper, and/or to credit any overpayments to Deposit Account No. 50-2527.

Respectfully,

By



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